

IN THE CLAIMS:

Please amend the claims as follows:

1. (currently amended) A method of making a photonic via comprising:
making a hole in a substrate, wherein the hole extends from one side of
the substrate through the substrate to an opposite side of the substrate;
~~depositing a cladding material into the hole, the cladding material~~
~~substantially lining an interior surface of the hole; and~~
~~depositing an optical core material into the hole~~
heating the substrate to expand the hole;
inserting a fiber optic into the hole;
cooling the substrate to contract the hole to hold the fiber optic in
place; and
polishing the substrate.
2. (currently amended) The method of claim 1 further comprising:
forming a lens on top of the ~~optical core material~~ fiber optic.
3. (currently amended) The method of claim 2 further comprising:
depositing a polymer on top of the ~~optical core material~~ fiber optic; and
curing the polymer to form a lens.

4-15 (cancelled).

16. (previously added) The method of claim 1, wherein making the hole in the substrate is achieved by etching.

17-25 (cancelled).

26 (added). The method of claim 1 wherein the heating temperature is dependent on the coefficient of thermal expansion of the substrate.

27 (added). The method of claim 26 further comprising heating the substrate to approximately 150-200 degrees C.

28 (added). The method of claim 1, further comprising:

forming a waveguide having an angled surface to redirect light in a direction substantially perpendicular to the fiber optic.

29 (added). The method of claim 28, wherein forming the waveguide comprises:

depositing a cladding layer over a surface of the substrate;

etching to align the cladding layer with one side of the hole on the

substrate;

depositing a layer of optical material over the cladding and the substrate wherein a difference in height between the cladding and the substrate causes the optical material to form a surface having approximately a 45 degree angle over the hole.

30. The method as recited in claim 29 wherein the optical material comprises glass.

31. The method as recited in claim 28, further comprising:

depositing a cladding layer on the substrate, wherein the hole extends through the cladding layer;

depositing a layer of optical material over the cladding;

depositing a mask on the optical material with an opening over the hole; and

etching to form at least one angled surface in the optical material.

32. The method as recited in claim 31 further comprising:

etching to form two angled surfaces in the optical material.